

AMENDMENTS TO THE DRAWINGS

The attached sheets include changes to Figs. 10-12. These sheets, which include Figs. 10-12, replace the original sheets including Figs. 10-12. A prior art label is added to those figures.

Attachment: Replacement Sheet(s)

REMARKS/ARGUMENTS

In response to the Office Action dated October 9, 2009, Applicants amend their application and request reconsideration. In this Amendment the originally examined claims, claims 1-8, are cancelled and new claims 9-25 are added.

The Examiner requested that a prior art label be added to Figures 10-12. Substitute drawings sheets including that change are supplied.

The drawings were also objected to as not showing the time division device mentioned in examined claim 3 and now mentioned in claim 9. In fact, the time division device is shown in the drawings as part of a computer 4300. See the description in the patent application from page 41, line 13 through page 42, line 10. Therefore, the objection is traversed and no drawing amendment is made.

The Examiner requested the addition of a cross-reference to the specification with respect to the international patent application from which this national phase application is derived. No cross-reference is supplied because none is necessary pursuant to 37 CFR 1.176(b)(5). This application was filed with an Application Data Sheet providing the priority information. According to the cited section of the CFR, "Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. §119(e) or 120, and §1.78(a)(2) or §1.78(a)(4), **and it need not otherwise be made part of the specification.**"

The rejection of the claims as indefinite pursuant to 35 USC 112, is moot in view of the cancellation of the original claims and the submission of new claims. In the preparation of the new claims, the power supply and the ozone generating units are clearly separated and their interconnection is explained. In addition, the structures of those ozone generating units and the power supply are independently explained.

New independent claim 9 incorporates, in clarified form, the limitations of examined claims 1 and 3. Claims 10 and 11 are derived from examined claim 2 with the further addition, in claim 11, of a description of the parallel reactors, corresponding to Section 20-a in Figure 1 of the patent application. Claim 12

describes the transformer with respect to transformer coils rather than the two alternatives, i.e., transformer coils or reactor coils. A similar claim, but directed to the alternative of the reactor coils, is presented as claim 14. Claims 13 and 15 are derived from examined claim 5, as further explained in the patent application with respect to Figure 8 at pages 45 and 46 of the patent application. Claim 16 is derived from original claim 6, claim 17 is derived from original claim 7, and claim 18 is derived from original claim 8.

New claim 19 is a clarified form of examined claim 4. New claim 20 is a clarified form of examined claim 5. Those claims 4 and 5 were stated to be allowable. Claims 21-25 are respectively derived from examined claims 2 and 6, and new claims 17 and 18. Those claims are allowable, as conceded in the Office Action, and depending from an allowable claim so that there is no further comment on those claims 19-25.

Examined claims 1-3 and 6 were rejected as unpatentable over Tabata (JP 2004-142963, hereinafter Tabata '963) in view of Tabata et al. (U.S. Patent 5,942,196, hereinafter Tabata '196). Reliance was placed upon Published U.S. Patent Application 2004/0076560 as an English language equivalent of Tabata '963. In view of the newly submitted claim 9, which includes the limitations of examined claims 1 and 3, presumably this prior art rejection would be applied at least against claim 9. If claim 9 is patentable over the asserted combination of Tabata '963 and Tabata '196, then so are claims 10-18. Therefore, the following commentary focuses solely on claim 9.

With respect to the limitation of examined claim 3, the only commentary in the Office Action appears at page 6. There, the total commentary is, "As to the subject matter of each of claims 2, 3, and 6, Tabata teaches it in Fig. 9 or 11." Based upon the figures of Tabata '963, apparently the reference is to Tabata '196. Applicants, many of whom are named inventors on each of the two publications relied upon in the principal prior art rejection, disagree with the rejection, to the extent understood. Because of brevity of the explanation of the rejection, Applicants have had to speculate on the basis of the obviousness assertion of claim 3.

The time division device that is described in the final paragraph of claim 9, and was described in claim 3, provides an important improvement/advantage of the claimed invention. Pages 44 and 45 of the patent application explain and emphasize this improvement. As already explained, the time division device is part of a computer and controls the inverter so that the electrical load of the ozone generating apparatus may always be maintained in a balanced state. For example, the number of phases may change, which can occur, as explained in the patent application, during operation of the ozone generating apparatus. Nevertheless, the novel ozone generating apparatus continues to operate smoothly. Usually, taking one of the phases "offline" during operation produces imbalance in the electrical load and instability in the ozone generating apparatus. See page 44, line 13 through page 45, line 16 of the patent application, explaining that the operation of the ozone generating apparatus can continue, even if one of the phases is defective, because of the time division device. As explained at those pages 44 and 45, the number of active phases is changed through an input signal supplied to the time division device. That device, in response, alters the operation of the ozone generating apparatus to maintain proper operation when the number of active phases changes.

Figure 9 of Tabata '196 shows a three-phase inverter circuit 102 supplied, through a driving circuit 103, with control signals by an inverter control circuit 104. That figure is described in columns 12 and 13 of Tabata '196. There is no description in that passage as to how the control circuit 104 operates and no suggestion for a time division operation or any way of tolerating a loss of one of the three illustrated phases, while continuing operation of the ozone generator. Therefore, Figure 9 of Tabata '196 cannot supply the time division device or its advantage.

Figure 11 of Tabata '196 is similar to Figure 9 of that patent except that the apparatus of Figure 11 includes three three-phase inverter circuits, each of which includes a respective inverter control circuit 104 and each of which supplies a respective high voltage transformer 106. That figure is described within column 14 of Tabata '196. That description is even more brief than the description of Figure 9 and,

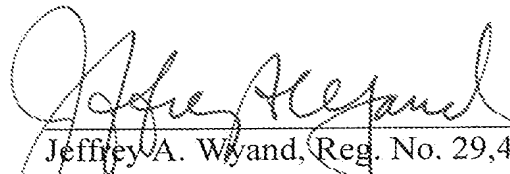
like the earlier description, never mentions or suggests a time division device or any element that would permit continued operation in the event one of the phases fails.

Based upon the cited description of Tabata '196, that patent cannot suggest, even in combination with Tabata '963, the invention as defined by new claim 9. To establish obviousness, at least all of the elements of a claimed apparatus must be shown to be present in at least one of the publications applied in the rejection. That fundamental test is not met here, meaning that *prima facie* obviousness has not been established with respect to claim 9 nor any of its dependent claims, claims 10-18.

Claims 7 and 8 were rejected over the same combination of references and further in view of Shinagawa et al. (U.S. Patent 6,143,256, hereinafter Shinagawa). This rejection is traversed as to the claims now pending but does not need further comment in view of the foregoing remarks concerning independent claim 9, presumably the only independent claim that is potentially rejectable pursuant to the Office Action.

For the foregoing reasons, new claims 9-18 are patentable over the prior art applied in rejecting examined claims 1-3 and 6-8. As explained above, claims 19-25 are already conceded to be allowable. Therefore, all of the pending claims, claims 9-25, should now be allowed.

Respectfully submitted,


Jeffrey A. Wyand, Reg. No. 29,458
LEYDIG, VOIT & MAYER
700 Thirteenth Street, N.W., Suite 300
Washington, DC 20005-3960
(202) 737-6770 (telephone)
(202) 737-6776 (facsimile)

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